Daniela Buchwald

Curriculum Vitae (August 2019)

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Date of birth: 26.01.1988 in Germany

Education

Jun 2015–Present	**PhD student in Sensory and Motor Neuroscience**, *University of Göttingen*. Thesis: Visual and tactile signal processing for high-order object recognition, Supervised by Prof. Dr. H. Scherberger at the German Primate Center
Apr 2011–Apr 2015	**Master of Science in Computer Science**, *University of Göttingen*. Thesis: A region based combinatorial approach for object segmentation in computer vision, Supervised by Prof. Dr. F. Wörgötter
Oct 2007–Mar 2011	**Bachelor of Science in Biology**, *University of Göttingen*. Thesis: Nutzung von Motiven als Ankerpunkte für multiple Alignments, Supervised by Prof. Dr. B. Morgenstern

Summer schools and Workshops

Jul/Aug 2019	**Summer School for Primate Cognitive Neuroscience 2019**, *Graduate Training in Primate Neuroscience (GTPN)*, Bad Bevensen, Germany.
Aug 2018	**Wissenschaft Visuell Erzählen**, *Nationales Institut für Wissenschaftskommunikation*, Kassel, Germany.
Mar/Apr 2017	**G-Node Advanced Neural Data Analysis Course**, *Forschungszentrum Jülich*, Jülich-Barmen, Germany.
Feb 2017	**Blackrock Microsystems' hands-on electrophysiology workshop**, *Blackrock Microsystems*, Hannover, Germany.
Sep 2016	**5th CITEC Summer School on Adaptive Systems**, *CITEC*, Bielefeld, Germany.

Certifications and advanced training

2016	**Scientific integrity and the responsible conduct of research**, *Organized by the German Primate Center*.
2015	**Laboratory Animal Science Course on Primates**, *according to FELASA guidelines (Func. A and B), organized by the European Primate Network (EUPRIM-Net)*.
2012	**ISTQB Certified Tester**, *Foundation Level*.

Working Experience

Sep 2017–Present	**Database manager**, *German Primate Center*, Göttingen, Germany. Responsible for maintaining and updating the research animal documentation database system for the Neurobiology department
Mar 2011–Mar 2012	**Research assistant**, *University of Göttingen*, Dep. of Microbiology and Genetics, Department Bioinformatics. Programmer for the PredPlantPTS1 project, supervisor: Dr. Thomas Lingner (see 2012 paper)
Jun 2009–Dec 2009	**Research assistant**, *University of Göttingen*, Dep. of Microbiology and Genetics, Department Bioinformatics. Programmer for the MuSi project, supervisor: Dr. Ingo Bulla (see 2015 paper)
Feb 2006–April 2007	**Stagehand for light and sound**, *Brunnentheater Helmstedt*. Set up light and sound for different events on a local theatre, including plays and concerts

Service

Jan 2019	**Poster contribution for Fourth Night of Science**, Göttingen, Germany. Created a poster about the work of the Neurobiology Laboratory at the German Primate Center for the forth Night of Science where scientists from the Göttingen Campus present their work to the public
Aug 2018–Present	**Organiser**, *WoCaNet 2019*, Göttingen, Germany. Member of the organisation team for the Women's Career and Networking Symposium 2019 in Göttingen, Germany

May 2017– Sep 2018	**Deputy Student representative**, *Georg-August University School of Science (GAUSS)*, Göttingen, Germany. Deputy speaker for the local graduation school, representing the voices of doctoral students from different faculties
Jan 2017	**Volunteer at Third Night of Science**, Göttingen, Germany. Participated in the outreach event Night of Science where scientists from the Göttingen Campus present their work to the public

Awards and Scholarships

2019	GGNB Travel Award to attend the meeting of the Society for the Neural Control of Movement, Toyama, Japan
2018	GGNB Travel Award to attend Neuroscience 2018 Conference in San Diego, USA
2017	Best Talk Award, Awarded at the 28th Neurobiology Doctoral Students Workshop (NeuroDoWo)

Publications

2015	Blagovesta Popova , Steffen Schubert, Ingo Bulla, <u>Daniela Buchwald</u> and Wilfried Kramer. **A Robust and Versatile Method of Combinatorial Chemical Synthesis of Gene Libraries via Hierarchical Assembly of Partially Randomized Modules.** PLoS One. 10(9):e0136778.
2012	Sigrun Reumann, <u>Daniela Buchwald</u>, and Thomas Lingner. **PredPlantPTS1: a web server for the prediction of plant peroxisomal proteins.** Frontiers in plant science 3.

Teaching experience

Jun/Jul 2019	**Supervision of the Lab Rotation of Marita Metzler**, *German Primate Center*, Göttingen, Germany.
Feb/Mar 2018	**Supervision of the Lab Rotation of Inés Hojas García-Plaza**, *German Primate Center*, Göttingen, Germany.
Apr–Oct 2018	**Teaching Assistant**, *German Primate Center*, Göttingen, Germany. Organisation of the 'Motor Systems' lecture and seminar, taught by Prof. Dr. Hans Scherberger

Presentations

Oral Presentations

Mar 2018	**Sensory signal processing during passive finger stimulation and grasping**, SMN/SFB889 Retreat 2018, Göttingen, Germany.
Mar 2018	**Sensory signal processing for object recognition and grasping in primates**, Evaluation of the Neurobiology Laboratory, German Primate Center, Göttingen, Germany.
Sep 2017	**Multimodal object recognition and grasping in primates**, PhD Symposium of the Bernstein Conference 2017, Göttingen, Germany.
Aug 2017	**Reach out and Touch - Multimodal object recognition for motor planning in primates**, 28th Neurobiological Doctoral Students Workshop, Marburg, Germany.
Jan 2017	**Vision vs. Touch: Multimodal object recognition for motor-planning in the primate brain**, SMN/SFB889 Retreat 2017, Pichl, Austria.
Aug 2016	**Vision vs. Touch: Does the type of sensory information alter the way primates plan grasps?**, 27th Neurobiology Doctoral Students Workshop, Bielefeld, Germany.

Poster Presentations

Apr 2019	**Influence of visual and tactile object recognition on motor planning in non-human primates**, *Daniela Buchwald and Hans Scherberger*, 29th Annual NCM Meeting, Toyama, Japan.
Mar 2019	**Multimodal object recognition in the primate brain during a delayed-grasp task**, *Daniela Buchwald and Hans Scherberger*, 13th Göttingen Meeting of the German Neuroscience Society, Göttingen, Germany.
Mar 2019	**Multimodal object recognition in the primate brain during a delayed-grasp task**, *Daniela Buchwald and Hans Scherberger*, 12th Primate Neurobiology Meeting, Göttingen, Germany.
Nov 2018	**Multimodal signal processing for grasp planning in the primate brain**, *Daniela Buchwald, Benjamin Dann and Hans Scherberger*, Neuroscience 2018, San Diego, United States of America.

Aug 2018	**Sensory signal processing during a delayed-grasp task in the primate brain**, _Daniela Buchwald_, _Benjamin Dann and Hans Scherberger_, Hand, Brain and Technology: the Somatosensory System, Ascona, Switzerland.
Mar 2018	**Tactile signal processing in the primate brain**, _Daniela Buchwald, Benjamin Dann, Domenico Camboni, Calogero M. Oddo and Hans Scherberger_, 11th Primate Neurobiology Meeting, Tübingen, Germany.
Mar 2017	**Comparison of visual and tactile object recognition for grasp planning in non-human primates**, _Daniela Buchwald and Hans Scherberger_, 10th Primate Neurobiology Meeting, Göttingen, Germany.
Oct 2016	**Comparison of visual and tactile object recognition for grasp-planning in non-human primates**, _Daniela Buchwald and Hans Scherberger_, Joint SFB 870/SFB 889 Symposium, Munich, Germany.
Sep 2016	**Comparison of visual and tactile object recognition for grasp-planning in non-human primates**, _Daniela Buchwald and Hans Scherberger_, 5th CITEC Summer School on Adaptive Systems, Bielefeld, Germany.

Scientific outreach

2019	**TV interview for X:enius**, _Topic: Alternativen zu Tierversuchen_. Interview for a broadcast about alternatives to animal experiments, specifically why experiments on non-human primates are still necessary
Feb 2018	**Dem Tastsinn auf der Spur**, DPZ Science Slam 2018, German Primate Center, Göttingen, Germany. Short talk about our work in passive finger stimulation on non-human primates for the public
Feb 2017	**Prothesen mit dem Gehirn steuern**, News paper article in the Göttinger Tageblatt. Took part in a short interview about the work of the Neurobiology Laboratory at the German Primate Center

Conference Attendence without presentations

Apr 2019	**Tokyo Hand Meeting**, Tokyo, Japan.
Sep 2017	**Bernstein Conference 2017**, Göttingen, Germany.
Mar 2017	**12th Göttingen Meeting of the German Neuroscience Society** , Göttingen, Germany.
Dec 2016	**4th GGNB Science Day**, Göttingen, Germany.
Sep 2016	**PhD Symposium of the Bernstein Conference 2016**, Berlin, Germany.
Sep 2016	**Bernstein Conference 2016**, Berlin, Germany.
May 2016	**Restoration of Sensory and Motor Function 2016**, Göttingen, Germany.
May 2016	**Neurizons 2016: Speak your mind**, Göttingen, Germany.
Mar 2016	**Primate Neurobiology Conference 2016**, Tübingen, Germany.

Memberships

Bernstein Association for Computational Neuroscience, Neurowissenschaftliche Gesellschaft (German Neuroscience Society), Society for the Neural Control of Movement, Interdisciplinary Network of Researchers in Touch

Computer skills

Programming and Markup Languages

Advanced	MatLab, LabView, LaTeX, Java, C++, Perl, HTML
Intermediate	Python, R, Delphi
Basic	C, Assembler, Turbo Pascal, XML

IT-Skills

OS	Linux, Windows, MAC OS, Android
Versioning	git, SubVersion
Design	Adobe Illustrator/Photoshop, GIMP, Shotcut
Office	Windows Office (Word, Excel, PowerPoint)

Method skills

- Handling and training of non-human primates

- Surgical assistance (e.g. assistance with implantation/deplantation of electrodes for central and peripheral nervous system and head holder systems)

- Care of implanted animals (e.g. wound margin care and brain chamber cleaning)
- Measuring primate behaviour (e.g. LabView, Data glove, DeepLabCut and camera systems)
- Setup building for experiments with non-human primates

- Isolation and analysis of DNA
- Transformation of bacterial, yeast and human HeLa cells
- PCR
- Gel electrophoresis
- Fluorescence microscopy
- Medium preparation

- Statistical data analysis with MatLab, Python and R
- Spike sorting with Wave_clus
- Analysis of genomic data

- 3D modelling and printing using different systems

Languages

German	Mothertongue
English	Fluent
Latin	Latinum
Spanish	Basic